

WHAT IS CLAIMED IS:

1. A method of determining the size of particles in a particle sample, said method comprising the steps of:
  - providing a sample chamber;
  - providing a laser light source that produces a beam of laser light;
  - passing said particle sample through said sample chamber;
  - focusing said beam of laser light to a specific point in said sample chamber, wherein said beam of laser light is diffracted by at least one particle passing through said specific point, therein causing diffracted light to emanate from said specific point;
  - providing at least one detector array that converts light into corresponding electronic signals;
  - providing at least one lens that is focused at said specific point in said sample chamber, wherein said at least one lens directs at least some of said diffracted light onto said at least one detector array;
  - determining the size of said at least one particle that caused said diffracted light by analyzing said electronic signals generated by said at least one detector array.